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Flying Operations

H-1 AIRCREW EVALUATION CRITERIA



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This instruction implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes the H-1 Aircrew Evaluation Criteria consistent with the Aircrew Standardization/Evaluation Program that support Air Force objectives and is applicable to all units assigned to or gained by MAJCOMs and applies to commanders, operations supervisors, and aircrews assigned or attached to all flying activities of these commands. It does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC). Major commands will send one copy of their supplement to HQ USAF/XOOT and HQ AFSPC/DOSH. Field units below MAJCOM level will forward copies of their supplements to this publication to their parent MAJCOM office of primary responsibility for post publication review. Submit suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through unit/NAF standardization/evaluation channels, to HQ AFSPC/DOSH, 150 Vandenberg St., Suite 1105, Peterson AFB CO 80914-4200. This instruction replaces information previously found in AFI11-408AFSPC1, 1 Aug 97, Attachment 5. **Attachment 2** is the H-1 Aircrew Evaluation Criteria.

The Privacy Act of 1974 affects this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management Systems (AFORMS) covers required information. The authority for maintenance of the system is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), DoD 7730.57 (Aviation Career Incentive Act and Required Annual Report), and Executive Order 9497.

This instruction contains reference to the following field (subordinate level) publications and forms which, until converted to departmental level publications and forms, may be obtained from the respective MAJCOM publications office:

Form: AF Form 4068, **H-1 Helicopter Crew Member Flight Evaluation**.

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Chapter 1

GENERAL INFORMATION

1.1. General. Conduct all evaluations IAW AFI 11-202V2, *Aircrew Standardization/ Evaluation Program*, and this publication. This volume contains detailed procedures and criteria for the evaluation of individual aircrew members assigned flying duties in the UH-1N. The H-1 Aircrew Standardization and Evaluation Program is the commander's tool to validate mission readiness, effectiveness and standardization of H-1 flying units. Specific program objectives are to:

- 1.1.1. Develop and ensure standardization of operational procedures for H-1 employment.
- 1.1.2. Ensure compliance with appropriate operational, training, and administrative directives.
- 1.1.3. Evaluate and revise H-1 specific operational directives, procedures, and techniques as required.
- 1.1.4. Provide a set of H-1 specific standards to assess individual aircrew proficiency and capability.
- 1.1.5. Recognize trends and recommend/initiate changes to H-1 training programs and directives.

1.2. Waiver Authority. The MAJCOM/DO is the waiver authority for provisions of this instruction unless otherwise indicated. Request waivers to this instruction through applicable standardization/evaluation channels to MAJCOM/DO or equivalent level. MAJCOMs will provide information copies of approved waivers to HQ Air Force Space Command Airfield and Aviation Operations Branch (HQ AFSPC/DOSH). Waivers to supplemental guidance will be handled by the MAJCOM agency that generated the supplement.

1.3. Higher Headquarters Stan/Eval Program:

1.3.1. HQ USAF/XOO:

- 1.3.1.1. Designates AFSPC as lead command, in accordance with AFPD 10-9, *Lead Operating Command Weapon Systems Management*, for the H-1.
- 1.3.1.2. Assigns HQ AFSPC as OPR for this instruction.
- 1.3.1.3. Monitors and reviews H-1 programs ensuring policies, guidance and supplements are adequate.
- 1.3.1.4. Resolve issues of contention between the H-1 lead command (AFSPC) and other user commands.

1.3.2. Lead Command (AFSPC):

- 1.3.2.1. AFSPC will develop this instruction consistent with the USAF Standardization and Evaluation Program and unique requirements, according to AFPD 11-2, *Aircraft Rules and Procedures*. AFSPC will coordinate operational procedures, evaluation criteria and guidance published in this instruction with user MAJCOMs operating like weapons systems.
- 1.3.2.2. Develop and maintain any additional forms required by all user-MAJCOMs. These forms will be approved and issued as AF Forms if they are needed by more than one command.
- 1.3.2.3. Convene conferences and working groups, as necessary to review and improve H-1 stan/eval procedures.

1.3.3. User-MAJCOMs:

1.3.3.1. MAJCOMs may supplement this instruction, provided these supplements are not less restrictive.

1.4. Unit Stan/Eval Programs (Operations Group, Squadron and Flight):**1.4.1. Unit Programs:**

1.4.1.1. Evaluation profiles will be representative of unit missions as defined in AFI 11-2H-1, Volume 1, *H-1 Helicopter Aircrew Training*.

Chapter 2

EVALUATION PROCEDURES

2.1. Evaluation Criteria Source . H-1 crewmember evaluation criteria for instrument, qualification, mission and instructor evaluations are located in [Attachment 2](#).

2.2. Evaluation Conduct:

2.2.1. Stan/Eval Flight Examiners (SEFE) will use the evaluation criteria contained in this volume for conducting all flight and emergency procedures evaluations (EPE). To ensure standard and objective evaluations, SEFEs will be thoroughly familiar with the prescribed evaluation criteria.

2.2.2. Unless specified, the examinee or SEFE may fly in any seat (within their crew qualification) that will best enable the SEFE to conduct a thorough evaluation.

2.2.3. Prior to flight, the SEFE will brief the examinee on the purpose and conduct of the evaluation. The examinee will accomplish appropriate flight planning/mission preparation. SEFEs will be furnished copies of mission materials to include necessary maps (only one map per aircraft is required), flight logs, etc.

2.2.4. Units will utilize the AFSPC Form 153, **H-1 Helicopter Crewmember Flight Evaluation** (to be AF Form 4068, **H-1 Helicopter Crewmember Flight Evaluation**), and AF Form 4031, **CRM Skills Criteria Training/Evaluation Form** to aid in administering flight evaluations and EPEs.

2.2.5. When it is impossible to evaluate a required area in flight (due to equipment malfunctions, operational requirements, scheduling restrictions, or weather), the SEFE may elect to evaluate the area(s) by an alternate method (verbal, procedural trainer). Document why required area(s) were not evaluated in flight, and the alternate method of evaluation used, in the additional comments paragraph of the examiner's remarks section of the AF Form 8, **Certificate of Aircrew Qualification**. If, in the SEFEs judgment, a required item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight.

2.2.6. For initial evaluations, all required items must be performed by actual demonstration.

2.2.7. Critical grading areas have been established for all flight evaluations IAW AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. Critical areas are defined as events that require satisfactory accomplishment by the examinee in order to successfully achieve the mission objectives.

2.2.8. All simulated emergency procedure maneuvers will be accomplished according to the guidance in the flight manual, the operations manual, and appropriate training manuals.

2.2.9. The SEFE will thoroughly debrief all aspects of the evaluation. During the debrief, the SEFE will review the overall rating, specific deviations, area grades assigned, and required additional training (if applicable).

2.3. Spot Evaluations. Aircrew Spot evaluations may be administered by any H-1 OGV flight examiner, regardless of aircrew specialty. However, if the examiner is administering a SPOT evaluation to a person in another aircrew specialty, only boldface, safety consciousness, judgment, situational awareness, and instructor duties (if applicable) may be evaluated.

2.4. Aircrew Publications. Aircrew publications will be checked during all qualification evaluations to ensure they are current and properly posted. Each aircrew member is responsible for maintaining the TO 1H-1(U)N-1 *Flight Manual* and the TO 1H-1(U)N-1CL-1 *Flight Crew Checklist*. Each MAJCOM will determine any additional flight publications their aircrew members are required to maintain.

2.5. Crew Resource Management. Crew Resource Management (CRM) is the effective use of all available resources--by individuals or crews to safely and efficiently accomplish an assigned mission or task. The term "CRM" will be used to refer to the training program, objectives, and key skills directed to this end. CRM will be evaluated on all flight evaluations. Use the AF Form 4031, IAW AFI 11-290, *Cockpit/Crew Resource Management Training Program*, for initial and recurring evaluations. Include all seven CRM skill areas on the AF Form 4031 as graded areas. Grading standards will be consistent with the criteria listed on the AF Form 4031, for each specific area.

2.5.1. Situational Awareness. The aircrew member's continuous perception of self and aircraft in relation to the dynamic environment of flight, threats, and mission, and the ability to forecast, then execute, tasks based on that perception. Includes knowledge and skills to prevent the loss of situational awareness, recognize the loss of situational awareness, and techniques for recovering from the loss of situational awareness.

2.5.2. Crew Coordination/Flight Integrity (Leadership and Assertiveness). The act of working with all members of the crew to accomplish the tasks of the mission. Utilizing all the members of a flying package to accomplish the mission at hand. Knowledge of, and effectively exercising the attributes of leadership, responsibility, assertiveness, conflict resolution, hazardous attitudes, behavioral styles, legitimate avenues of dissent, and team-building.

2.5.3. Communication. The act of sharing information with others to cause some kind of action: to direct, to inform, to question, or to persuade. Includes knowledge of common errors, cultural influences, and barriers (rank, age, experience and position). Skills will encompass listening, feedback, precision and efficiency of communication with all members and agencies (i.e. crewmembers, wingmen, weather, ATC, intelligence, etc.).

2.5.4. Risk Management/Decision Making. Logic-based, common sense approach to making calculated decisions on human, material, and environmental factors before, during, and after Air Force mission activities and operations. The ability to choose a course of action using logical and sound judgment based on available information. Includes risk assessment, the risk management process, tools, breakdowns in judgment and discipline, problem solving, evaluation of hazards, and control measures.

2.5.5. Task Management (Adaptability/Flexibility). The ability to alter a course of action based on new information, maintain constructive behavior under pressure, and adapt to internal and external environment changes. Includes establishing priorities, overload, underload, complacency, management of automation, available resources, checklist discipline, and standard operating procedures.

2.5.6. Mission Planning/Debrief (Mission Analysis). Includes pre-mission analysis and planning, briefing, ongoing mission evaluation, and post mission debrief as well as specific tools and techniques to be used in operational and training missions. Reviewing and discussing mission accomplishment looking at what was achieved what barriers were encountered and how the mission could be accomplished better next time.

2.6. Evaluation Grading Instructions:

2.6.1. Areas not applicable to the unit or mission need not be performed; however, all areas performed will be graded.

2.6.2. Base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety.

2.6.3. When grading criteria specifies that airspeed be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed for that area, the examinee will brief the desired airspeed.

2.6.4. The standards/grading criteria contained in [Attachment 2](#) of this volume are provided as a guide to assist the SEFE in determining grades. They are not necessarily provided as minimum/maximum parameters for each maneuver. Examiners should compare examinee performance for each grading area with the standards provided in this instruction, and consider all other factors before assigning grades. Derive the overall flight evaluation grade IAW AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, and this volume.

2.6.4.1. SEFE judgment must be exercised when wording of grading criteria is subjective and when specific situations are not covered.

2.6.4.2. SEFE judgment will be the determining factor in assigning the overall grade.

2.6.5. Critical Sub-Area. Critical sub-areas are graded either “Q” or “U.” Any unsatisfactory performance in a critical sub-area will result in a qualification level of “Q-3.” Critical sub-areas are identified in [Attachment 2](#) with an asterisk (*) prior to the sub-area number.

2.6.6. Non-Critical Sub-Area. Non-critical sub-areas are graded either “Q”, “Q-” or “U.” Unsatisfactory performance in a non-critical sub-area will result in no higher than a qualification level of “Q-2.”

2.7. Aircrew Examination Procedures:

2.7.1. Computer based training or electronic information management tool may satisfy the requirement for written examinations, if the computer/electronic format meets the requirements for examinations in AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*. Units may generate a unique test for each crewmember using appropriate computer software programs.

2.7.2. The minimum number of test questions are:

2.7.2.1. Qual Open -- 50 questions.

2.7.2.2. Qual Closed -- 25 questions.

2.7.2.3. Instrument Open -- 50 questions.

2.7.2.4. Mission Open -- 50 questions.

2.7.2.5. Flight Surgeon -- 20 questions.

2.7.3. AFSPC will provide an H-1 specific master question file (MQF) to all user-MAJCOMs.

Chapter 3

EVALUATION DESCRIPTION

3.1. Evaluation Requisites:

3.1.1. QUAL evaluation requisites. A qualification open book examination, a qualification closed book examination, a Boldface/Critical Action Procedures examination, a publications check, and an emergency procedures evaluation (EPE).

3.1.2. INSTM evaluation requisites. The instrument refresher course and an instrument open book examination.

3.1.3. MSN evaluation requisites. A mission open book examination.

3.2. Emergency Procedure Evaluations:

3.2.1. An EPE is required for all crewmembers on the qualification evaluation.

3.2.2. The purpose of the EPE is to evaluate systems knowledge and emergency procedures out of the in-flight environment, allowing a more in-depth investigation of systems knowledge and scenario driven circumstances.

3.2.3. EPEs will not be conducted in flight (Note: This does not preclude the flight examiner from presenting situational emergency procedures in flight, however, they will be graded under applicable sections of Area II and/or Area III on the AFSPC Form 153 (to be AF Form 4068), as required).

3.2.4. The EPE is a verbal evaluation and should be scenario driven with an emphasis on emergency procedures and systems knowledge. SEFEs may use one continuous scenario throughout the EPE or different scenarios for each emergency procedure.

3.2.5. Examinees may use publications that are normally available in flight. The examinee must recall applicable boldface items from memory.

3.2.6. Include the following items on EPEs:

3.2.6.1. Boldface Procedures. Boldface procedures can be associated with the situational emergency procedures. If not, knowledge of boldface procedures will be demonstrated to the flight examiner either verbally or written. All boldface emergencies must be covered for qualification evaluations.

3.2.6.2. Situational Emergency Procedures. Discuss a representative sample of emergencies per phase of the mission (ground operations, takeoff, cruise, and terminal operations).

3.2.6.3. Systems Knowledge. Operation of systems, limitations and capabilities.

3.2.6.4. The following additional items may be included on pilot and copilot EPEs:

3.2.6.4.1. AFMAN 11-217V1, *Instrument Flight Procedures*.

3.2.6.4.2. Unusual attitude recoveries.

3.2.6.5. The flight examiner will assign an overall grade (1, 2 or 3) in the Qualification Ground Phase of the AF Form 8, **Certificate of Aircrew Qualification**. Use the appropriate standards in Area 1 of [Attachment 2](#) of this volume as the evaluation criteria for EPE items.

3.3. Qualification (QUAL) Evaluations. Pilots and flight engineers will complete a recurring QUAL evaluation. Complete all required sub-areas for the crewmember's aircrew specialty on the AFSPC Form 153 (to be AF Form 4068) and in [Attachment 2](#), from areas I, II, and III. If the crewmember is an instructor, include and complete area V. Additionally, complete all sections of the AF Form 4031. Sub-areas labeled "optional" do not have to be accomplished in flight, but will be evaluated verbally.

3.4. Instrument (INSTM) Evaluations. All pilots will complete a recurring INSTM evaluation. Complete all required sub-areas on the AFSPC Form 153 (to be AF Form 4068) and in [Attachment 2](#), from areas II and IV. If the crewmember is an instructor, include and complete area V. Additionally, complete all sections of the AF Form 4031. Sub-areas labeled "optional" do not have to be accomplished in flight, but will be evaluated verbally. Normally, instrument evaluations will be conducted concurrently with qualification evaluations.

3.5. Mission (MSN) Evaluations. Pilots and flight engineers will complete a recurring MSN evaluation. Complete all of Area II (General) and a representative sample of mission sub-areas (Area VI) on the AFSPC Form 153 (to be AF Form 4068). If the crewmember is an instructor, complete Area V. Evaluators are encouraged to give the crewmember a scenario representative of a unit mission. Additionally, complete all sections of the AF Form 4031. Not every unit mission needs to be evaluated in flight and unit missions can be conducted day or night, with or without Night Vision Goggles (NVG). Pre-flight of NVGs will be evaluated under the sub-area Flight Equipment, in area II, General.

3.6. Instructor Evaluations. To initially qualify as an instructor in the H-1, the crewmember must successfully complete an INIT INSTR evaluation. The evaluation may be conducted as one flight covering areas II and V, plus a representative sample of areas III, IV (for pilots), and VI. Additionally, complete all sections of the AF Form 4031. This evaluation can be broken down into any number of flights to more closely mirror the H-1 schoolhouse syllabus.

3.6.1. MAJCOMs will determine appropriate crew compliment for initial instructor (INIT INSTR) evaluations.

3.6.2. Evaluate Area V during all periodic evaluations for instructors.

3.6.3. Thoroughly evaluate the examinee's instructor knowledge and ability as outlined in [Attachment 2](#). Document accomplishment of instructor evaluations in the Mission description paragraph of the Examiner's Remarks section of the AF Form 8, **Certificate of Aircrew Qualification**, on all INIT INSTR and recurring evaluations for instructors.

3.7. Formal Course Evaluations. Conduct evaluations IAW syllabus mission profile guidelines, or on a mission profile developed from syllabus training objectives. Formal course guidelines may be modified, based on local operating considerations or SEFE judgment. Grade training objectives and related areas using the performance criteria in this volume. For all pilot/co-pilot initial evaluations, a qualified instructor/flight examiner will be in a seat with a set of controls.

3.8. Forms Prescribed. AF Form 4068, **H-1 Helicopter Crew Member Flight Evaluation.**

MARVIN R. ESMOND, Lt Gen, USAF
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 10-9, *Lead Operating Command Weapon Systems Management*

AFPD 11-2, *Aircraft Rules and Procedures*

AFI 11-2H-1V1, *H-1 Helicopter Aircrew Training*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFMAN 217V1, *Instrument Flight Procedures*

AFI 11-290, *Cockpit/Crew Resource Management Training Program*

Abbreviations and Acronyms

AC—Aircraft Commander

AFSPC—Air Force Space Command

AF—Air Force

AFRC—Air Force Reserve Command

AFTO—Air Force Technical Order

AGL—Above Ground Level

AHO—Above Highest Obstacle

AIE—Alternate Insertion or Extraction

ANG—Air National Guard

AWL—Above Water Level

BMC—Basic Mission Capable

CP—Copilot

CRM—Crew Resource Management

DH—Decision Height

DME—Distance Measuring Equipment

EF—Evaluator Flight Engineer

EP—Emergency Procedure

EPE—Emergency Procedures Evaluation

CF—Functional Check Flight

FCIF—Flight Crew Information File

FE—Flight Engineer

FEF—Flight Evaluation Folder

FL—Flight Lead

GS—Ground Speed

HHQ—Higher Headquarters

IAW—In Accordance With

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

IP—Instructor Pilot or Initial Point

ITO—Instrument Take Off

KIAS—Knots Indicated Airspeed

LOC—Localizer

LZ—Landing Zone

MAP—Missed Approach Point

MAJCOM—Major Command

MC—Mission Copilot

MDA—Minimum Descent Altitude

MDS—Mission Design Series

MP—Mission Pilot

MQF—Master Question File

MSA—Minimum Safe Altitude

MSN—Mission

N/A—Not Applicable

NAF—Numbered Air Force

NAV—Navigation

NLT—Not Later Than

NM—Nautical Mile

NOTAM—Notice to Airman

NVG—Night Vision Goggle

PAR—Precision Approach Radar

RPM—Revolutions Per Minute

SA—Situational Awareness

SEFE—Standardization/Evaluation Flight Examiner

SELO—Standardization/Evaluation Liaison Officer

SQB—Secure Question Bank

TACAN—Tactical Air Navigation

TO—Technical Order

TOLD—Take off and Landing Data

TOT—Time on Target

USAF—United States Air Force

VFR—Visual Flight Rules

VMC—Visual Meteorological Conditions

VOR—VHF Navigation Aid

Terms

Certification—The process of certifying an individual to perform a specific event (i.e., water operations, cargo sling, etc.).

Eligibility Period—The 6-month period prior to the expiration date of an evaluation.

Emergency Procedures Evaluation—A verbal evaluation used to evaluate emergency procedures and systems knowledge.

Evaluation Profile—Defines the required items of an evaluation to include a scenario.

Initial Evaluation—The first evaluation of any type for a crew position in an MDS (i.e., INIT QUAL, INIT MSN, etc.).

MSN Evaluation—Qualifies an individual to perform the unit's operational mission.

Skills Criteria—Defined skills used as the basis for operational training and evaluation. The characteristics of the skill are that they are easily identifiable and offer consistency in grading evaluations.

Attachment 2**H-1 HELICOPTER CREWMEMBER FLIGHT EVALUATION CRITERIA****I. EMERGENCY PROCEDURES EVALUATION (P/FE) (requisite to flight)**

Asterisk (*) items identify critical sub-areas

***1. Boldface Procedures:**

- Q** Correct response in the correct sequence with little or no hesitation.
- U** Incorrect response or incorrect sequence, significant hesitation.

2. Situational Emergency Procedures:**NOTE:**

As related to an emergency procedures evaluation

- Q** Given a simulated emergency, correctly analyzed the situation and provided the appropriate action (BOLDFACE, if required provided promptly with correct response in the correct sequence). Used checklist or flight manual, as required.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Analysis slow or incomplete. Referred to checklist or flight manual, as required.
- U** Major deviations from Q criteria. Incorrect analysis or incorrect response to BOLDFACE. If required, BOLDFACE provided with significant hesitation or with incorrect response or incorrect sequence. Did not refer to checklist or flight manual.

3. Systems Knowledge:**NOTE:**

As related to an emergency procedures evaluation.

- Q** Thoroughly familiar with applicable aircraft systems, limitations, and performance characteristics.
- Q-** Minor deviations from Q criteria. Some deficiencies in knowledge level.
- U** Major deviations from Q criteria. Demonstrated unsatisfactory knowledge of systems, limitations, or performance characteristics. Deficiency may preclude safe or effective aircraft operation.

II.GENERAL:

Asterisk (*) items identify critical sub-areas

4. Knowledge of Publications, Systems, and Limits: (P/FE):

- Q** Demonstrated thorough knowledge of applicable aircraft, equipment, and systems operating limits. Publications current and properly posted. Ensured satisfactory operation within limits.

- Q-** Knowledge of aircraft systems, equipment, procedures, and operating limits marginal in some areas. Publications current but not properly posted.
- U** Demonstrated unsatisfactory knowledge of aircraft systems, equipment, and procedures or operating limits. Publications are not current. Operated the aircraft or systems outside of applicable limits.

5. Mission Planning: (P/FE):

- Q** Developed a sound and thorough plan to accomplish the mission. Accounted for all factors applicable to the flight (i.e. weather, NOTAMs, landing site data, FLIPs, weight and balance, performance data, fuel requirements, maps, etc.) IAW applicable directives. Flight engineers assisted in assessing all factors applicable to flight and actively contributed to mission planning as necessary.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Flight engineers did not adequately assess all factors applicable to flight or offer necessary assistance, which did not jeopardize safety or mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver/mission accomplishment. Planning inadequate or incorrect. Did not account for all factors applicable to the flight. Desired flight engineer assistance and/or contribution was inadequate which precluded safe and effective mission accomplishment

6. Performance Data/Weight and Balance: (P/FE)

- Q(P)** Checked all factors applicable to the flight. Verified accuracy of performance data and weight and balance information to ensure operating within specified parameters. If required, correctly computed TOLD and/or weight and balance IAW governing directives.
- Q(FE)** Checked all factors applicable to the flight. Satisfactory knowledge of weight and balance and other applicable directives and correctly computed a DD Form 365-4 and TOLD. Computed the DD Form 365-4 and TOLD within the following specified tolerances: Weight +/-100 pounds, center of gravity +/-0.1 inches, power available +/-1 percent, power required +/-2 percent, minimum safe single-engine airspeed +2/-1 knot(s), maximum safe single-engine airspeed +1/-2 knot(s), Vne +1/-2 knots.
- Q-** Minor errors or omissions in the above criteria. Computations within the following specified tolerances: Weight +/-200 pounds, center of gravity +/-0.2 inches, power available +1/-2 percent, power required +/-3 percent, minimum safe single engine airspeed +3/-1 knot(s), maximum safe single-engine airspeed +1/-3 knot(s), Vne +1/-3 knots.
- U** Major errors or omissions in the above criteria that would preclude safe and effective mission accomplishment. Exceeded the limits of Q-.

7. Briefings/Debriefings: (P/FE)

- Q** Presented a logical, well-organized, and professional briefing in a timely manner. Covered all factors pertaining to the flight and provided effective discussion for accomplishing the mission. Concluded the briefing in time to allow for a thorough preflight of personal equipment, aircraft and mission equipment. Considered the abilities/limitations of all crew and flight members. Effective use of training aids. Passengers were thoroughly and pro-

professionally briefed IAW applicable directives. Thoroughly debriefed the mission. Discussed mission accomplishment and debriefed deviations and lessons learned. Offered correct guidance as appropriate. Debriefed maintenance personnel as required. *Note:* If not the briefer/debriefer, actively participated and provided input when required. Fully understood the briefing/debriefing and followed instructions.

- Q-** Minor deviations from Q criteria. Events were out of sequence, redundant, and difficult to understand. Did not effectively use training aids. Focused on non-essential items and omitted minor details. Did not consider all aircrew members' abilities. Poor time management. Passenger briefing lacked sufficient information. Did not compromise safety or mission effectiveness. *Note:* If not the briefer/debriefer, did not fully understand duties and lack of action/input created minor problems that did not affect safe mission accomplishment.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Disorganized or illogical sequence. Presentation created doubts or confusion or omitted major events. Did not allow sufficient time for preflight of personal equipment, aircraft, and/or mission equipment. Ignored crew and flight members' abilities, limitations, and/or questions. Passengers not briefed. Did not debrief mission deviations or offer corrective guidance. Did not debrief maintenance personnel, as required. *Note:* If not the briefer/debriefer, late or missed the briefing. Not prepared or did not actively participate when requested. Did not fully understand duties, and lack of action/input created problems that impacted safe mission accomplishment.

8. Flight Equipment: (P/FE)

- Q** Ensured all required personal and mission equipment was available. Equipment was properly preflighted, operated, and secured.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, equipment limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Required equipment was not available, utilized, preflighted, operable, or left unsecured.

9. Preflight: (P/FE)

- Q** Accomplished required aircraft/equipment inspections IAW flight manual and applicable directives. Ensured the aircraft was correctly configured for assigned mission and is fully aware of aircraft readiness for flight. Appropriate checklists were out and available for reference.
- Q-** Minor deviations from Q criteria. Did not compromise safety or mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Did not use checklist (must be out and available for reference). Failed to accurately determine proper configuration or readiness of aircraft for flight.

10. Use of Checklists: (P/FE)

- Q** Effectively completed appropriate checklists with accurate and timely responses. Familiar with checklist and contents. Before Takeoff and/or Before Landing checklists adequately covered aircrew intentions in the event of an abort, aircraft problem etc.

- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or mission effectiveness. Slow to respond and/or had difficulty executing proper procedures. Poor checklist discipline. Before Takeoff and/or Before Landing checklists did not adequately cover aircrew intentions in the event of an abort, aircraft problem etc., yet did not compromise safety or aircraft limitations.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Did not use or complete checklists. Lacked acceptable familiarity with contents. Before Takeoff and/or Landing checklists did not adequately cover aircrew intentions in the event of an abort, aircraft problem etc., which compromised safety and/or exceeded aircraft limitations.

11. Communications/ATC Procedures: (P)

- Q** Fully knowledgeable of communications procedures. Required contacts were made without hesitation, omission, or discrepancy. Promptly complied with all controlling agencies instructions and made required reports. Obtained proper clearance from controlling agency.
- Q-** Minor deviations from Q criteria. Slow to comply with controlling agency instructions or unsure of reporting requirements. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Unfamiliar with proper communications procedures. Required contacts were delayed, misleading, or incorrect. Failed to comply with controlling agency instructions and/or accepted clearance that could not be complied with. Entered controlled airspace without proper clearance.

***12. Safety Consciousness: (P/FE)**

- Q** Recognized factors affecting safety of flight. Assessed available options and selected a suitable course of action based on reasonable risk assessment. Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Major deviations from Q criteria. Was not aware of or did not comply with all safety factors required for safe operation of aircraft or mission accomplishment. Did not adequately clear. Operated aircraft in a dangerous manner. Unnecessarily subjected crew/aircraft to increased risk. Compromised safety and allowed a dangerous situation to develop.

***13. Judgment: (P/FE)**

- Q** Assessed all aspects of the situation and took an appropriate course of action consistent with prudence, common sense, integrity, mission priority, and safe and effective mission accomplishment.
- U** Major deviations from Q criteria. Untimely or inappropriate decision led to inappropriate response to the situation or compromised integrity, safety, or degraded or prevented effective mission accomplishment.

***14. Situational Awareness: (P/FE)**

- Q** Aware of and responsive to all factors which could affect safety, crewmembers, aircraft or mission effectiveness.
- U** Major deviations from Q criteria. Unaware of or unresponsive to factors affecting mission accomplishment, safety, crewmembers, or aircraft.

15. Crew Coordination: (P/FE)

- Q** Communicated and coordinated effectively with other crewmembers without misunderstanding, confusion, or delay. Considered needs, responsibilities, abilities, and inputs of all crewmembers.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Improperly or ineffectively communicated or coordinated with other crewmembers, causing misunderstanding, confusion, or delay. Did not consider other crewmember's needs, responsibilities, abilities, or inputs.

16. Resource Management: (P/FE)

- Q** Effectively managed all resources (time, fuel, etc.) applicable to mission execution. Able to adapt available resources to changing situations.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Ineffective use of resources precluded mission accomplishment. Resources used inappropriately. Did not adapt available resources to changing situations.

17. Scanning/Clearing: (P/FE)

- Q** Provided clear, concise and positive direction to the crew during flight, reconnaissance, approaches, landing, and departures. Ensured aircraft clearance from obstacles.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Did not provide sufficient direction or directions were not clear, concise and positive. Affected safe, effective mission accomplishment. Did not assure adequate clearance from obstacles.

18. Forms Completion: (P/FE)

- Q** Has a thorough understanding of the information contained in aircraft/equipment forms and correctly determined aircraft/equipment status. Completed all required forms (before, during, and after flight, to include training folders, as applicable) without significant errors.
- Q-** Minor deviations from Q criteria. Demonstrated a need for additional training in some areas concerning aircraft / equipment forms.

- U Major deviations from Q criteria. Errors or omissions did/may preclude safe or effective aircraft/equipment operation or mission accomplishment. Could not determine aircraft/equipment status.

III. QUALIFICATION:

19. Cargo/Pax Loading/Offloading and Tiedown: (P/FE)

- Q Satisfactorily loaded/off loaded the aircraft and secured all cargo and equipment IAW the flight manual and other applicable directives.
- Q- Minor deviations from Q criteria. Did not affect safe/effective mission accomplishment.
- U Major deviations from Q criteria. Unsatisfactory knowledge/performance of aircraft/passenger loading and unloading. Major deviations which would affect safe/effective mission accomplishment.

20. Start-up/Shutdown Procedures: (P)

- Q Accomplished startup and shutdown procedures, including all required checks, IAW the flight manual, checklist, and applicable directives. Correctly configured the cockpit and coordinated with ground support personnel. Familiar with required responses to abnormal or emergency situations.
- Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U Major deviations from Q criteria. Errors or omissions precluded safe or effective maneuver/mission accomplishment. Incorrect or unfamiliar with startup or shutdown procedures or checks. Incorrect configuration or coordination with ground support personnel. Did not respond properly to abnormal or emergency situations.

21. Hover/Taxi Maneuvers: (P)

- Q Performed hover and taxi IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained desired position/ground track. Taxied at appropriate speeds and altitudes. Familiar with marshaling signals. Cleared the aircraft.
- Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U Major deviations from Q criteria. Errors or omissions precluded safe or effective maneuver accomplishment. Unfamiliar with or did not comply with applicable procedures. Did not safely control the aircraft or maintain desired position/ground track. Taxi speeds/altitudes inappropriate or dangerous. Insufficient knowledge of marshaling signals. Failed to clear the aircraft.

22. Takeoffs: (P)

- Q Performed takeoffs IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained constant groundtrack and climbout angle. Smooth power application. If necessary, takeoff abort executed in a safe and timely manner as briefed/required without exceeding aircraft limitations.

- a. **Normal Takeoff:** Initiated from the ground or hover. Applied hover power plus 10%, and achieved approximately 70 KIAS at 100 feet AGL (or IAW HV diagram) or as briefed.
 - b. **Marginal Power Takeoff:** Initiated at a 3-5 foot hover. Accelerated without ground contact. Applied no more than hover power. Cleared a 50-ft. obstacle downrange. Climbout above effective translational lift (ETL) without descending below 50-ft. and/or the obstacle while accelerating to 50 KIAS.
 - c. **Maximum Performance Takeoff:** Initiated from the ground. Applied desired power (usually hover power plus 10-15%) smoothly and expediently. Cleared a real or simulated 100-ft. obstacle. Climbout without descending below 100 ft. and/or the obstacle while accelerating to 70 KIAS.
 - d. **Slide Takeoff (optional):** Initiated from the ground. Maintained constant alignment during slide. Applied no more than hover power minus 5%. Accelerated through ETL and accomplished level liftoff. Cleared a 50-foot obstacle downrange. Climbout above ETL without descending below the obstacle while accelerating to 50 KIAS.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness. Slight compromise of power requirements.
- U** Major deviations from Q criteria. Errors or omissions precluded safe or effective maneuver accomplishment. Unfamiliar with or did not comply with applicable procedures. Did not safely control the aircraft or maintain desired ground track or climbout angle. Takeoff potentially dangerous. Unable to clear or avoid obstacle.

23. Approaches: (P)

- Q** Performed approach IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained constant groundtrack and approach angle. Descent and deceleration constant and even. If necessary, landing abort executed in a safe and timely manner as briefed/required without exceeding aircraft limitations.
- a. **Normal Approach:** Entered at 300 feet AGL and 70 KIAS. Started descent on an apparent approach angle of 30 degrees. Terminated to hover or touchdown at the desired landing point.
 - b. **Steep Approach:** Entered at 300 feet and 30 knots apparent ground speed. Started descent on an apparent approach angle of 45 degrees. Did not exceed 800 feet per minute rate of descent. Terminated to touchdown at the desired landing point.
 - c. **Shallow Approach:** Entered at 300 feet AGL and 70 KIAS. Started descent on an apparent approach angle of 10 degrees. Terminated to hover or slide at the desired landing point.
 - d. **Turning Approach (optional):** Entered from any applicable point in the traffic pattern. Executed a continually descending, decelerating turn to align the aircraft with the landing spot. Terminated to hover or touchdown at the desired landing point.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Unfamiliar with or did not comply with applicable procedures. Did not safely control the aircraft or maintain desired ground track or approach angle. Aircraft con-

trol erratic; excessive flare required to arrest descent. Desired landing point not achieved. Approach angle consistently under or overshoot. Exceeded 800-fpm descent rate with less than 40 KIAS.

24. Landing: (P)

- Q** Performed landing IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained constant heading.
- a. **To a Hover:** Terminated at 3-5 feet over the intended spot with no forward speed.
- b. **To a Touchdown: Maintained** constant rate of descent to touchdown. Touched down with minimal forward speed over the intended spot. Touched down without excessive descent rate and with no side drift.
- c. **To a Slide:** Maintained above ETL until touchdown. Maintained alignment with the landing area. Level touchdown accomplished at the intended location with minimal rate of descent.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Unfamiliar with or did not comply with applicable procedures. Did not safely control the aircraft or maintain heading. Aircraft control erratic or unsafe.

25. Traffic Pattern (prior to base turn): (P)

Table A2.1. General Traffic Pattern Deviation Criteria.

Event	Q	Q-	U
Airspeed	< 10 KIAS	< 20 KIAS	> 20 KIAS
Altitude	< 50 foot	< 100 foot	> 100 foot

- Q** Performed traffic pattern IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained a rectangular pattern. Maintained 90 KIAS and 500 feet AGL on downwind; 70 KIAS and 300 feet AGL on base (or as local directives dictate). Conducted a level turn to final. Cleared the aircraft.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Did not clear the aircraft.

26. Single Hydraulic Failure: (P/FE)

- Q(P)** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Pattern, approach, and landing adjusted to the situation. Smooth, precise, and controlled aircraft movement.. Touchdown from hover accomplished with no sideward drift. Touchdown to slide accomplished with an appropriate amount of forward speed and appropriate lane alignment.

- Q(FE)**Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Communicated aircraft alignment, and performance to pilot flying in an accurate and timely manner. Able to explain corrective actions.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control erratic; frequent major heading deviations. Touchdown accomplished dangerously or too fast/slow. Unaware of or unresponsive to factors affecting the aircraft.

27. Manual Fuel: (P/FE)

- Q(P)**Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Pattern, approach, and landing adjusted to the situation. Smooth, precise, and controlled aircraft movement. Controlled engine and rotor rpm throughout the maneuver. Maintained manual engine torque approximately 5-10 % below the governed engine.
- Q(FE)**Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Communicated aircraft performance in an accurate and timely manner. Able to explain corrective actions.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Deviations of Q greater than 10% below the governed engine. Rarely married or swapped Nf needles, and applied proper corrections.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Deviations of Q greater than 20% below the governed engine. Unfamiliar with or did not comply with established procedures. Aircraft control erratic or unsafe; frequent overcontrol of engine and rotor RPM. Unaware of or unresponsive to factors affecting the aircraft.

28. Single Engine: (P/FE)

- Q(P)**Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Pattern, approach, and landing adjusted to the situation. Smooth, precise, and controlled aircraft movement. Touchdown speed commensurate with terrain and power available. Adequately reviewed and/or briefed go-around requirements and reviewed power available/required as the situation dictates.
- Q(FE)**Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Adequately reviewed and/or briefed go-around requirements and recomputed/reviewed power available/required regardless of type approach (i.e. landing from a hover or slide landing). Communicated aircraft performance quickly and effectively. Able to explain corrective actions.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft

control erratic or unsafe. Unaware of go-around requirements or power available/required. Unaware of or unresponsive to factors affecting the aircraft.

29. Autorotation: (P/FE)

Q(P) Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Smooth, precise, and controlled aircraft movement. Controlled Nr throughout the maneuver. If a power recovery during descent is required, initiated in a timely and effective manner without exceeding aircraft limitations. Flared at an appropriate altitude (between approximately 100 and 75 feet AGL), smooth and controlled power recovery, and would have landed safely and in the desired area. Power recovery no lower than 4 feet AGL.

a. **Straight Ahead Autorotation (P)** Entered above 500 feet AGL.

b. **Turning Autorotation (P)** 90-degree turning entered above 500 feet AGL and 180 degree turning autorotation entered above 800 feet AGL.

Q(FE) Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Communicated aircraft performance quickly and effectively. All calls made to the pilot flying were consistent and clear, and FE was able to explain corrective actions.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control erratic or unsafe. Unable to maintain aircraft position or alignment. Cushion applied too early/late in improper amount. Unaware of or unresponsive to factors affecting the aircraft. Would not have landed in the desired area.

IV. INSTRUMENTS: (P)

Table A2.2. General Instrument Deviation Criteria.

Event	Q	Q-	U
Airspeed	< 10 KIAS	< 20 KIAS	> 20 KIAS
Altitude	< 100 foot	< 300 foot	> 300 foot
Heading	< 10 degrees	< 15 degrees	> 15 degrees
Maintaining an Arc	< 1 NM	< 2 NM	> 2 NM

30. Instrument Cockpit Check:

Q Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Ensured required publications were onboard.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Did not use the appropriate checklist or omitted major item(s).

31. Instrument Departure/Climb/Level-Off:

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Smooth, precise, and controlled aircraft movement. Performed departure as published/directed and complied with all restrictions. Maintained course/heading accurately. Levelled off smoothly at specified altitude. Promptly established proper cruise airspeed.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Aircraft control erratic or unsafe. Failed to comply with published/directed departure instructions.

32. Use of NAVAIDs/Navigation:

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Ensured NAVAIDs were properly tuned, identified, and monitored. Used appropriate navigation procedures and demonstrated capability to navigate accurately. Arrived at fix to fix point within 1 mile. Complied with clearance instructions. Aware of position at all times.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Arrived at fix to fix point within 2 miles.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver/mission accomplishment. Errors in procedures/use of navigation equipment. Could not establish position. Deviations would have violated airspace or resulted in unsafe maneuver. Exceeded Q- standards.

33. Holding Procedures:

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to correctly enter and maintain a holding pattern. Able to estimate winds and makes appropriate corrections. For VOR holding, able to make timing corrections. Smooth, precise, and controlled aircraft movement. Complied with ATC instructions.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission accomplishment. Unfamiliar with holding procedures or directives. Incorrect entry procedures. Unable to make appropriate wind or timing corrections. Aircraft control erratic or unsafe. Failed to comply with ATC instructions.

34. Precision Approach:

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to fly a precision approach as published /directed. Complied with all restrictions. Made smooth and timely corrections. Position would have permitted a safe landing.
 - a. **ILS:** Maintained on course and glidepath with no more than momentary deviations 1 dot left or right of localizer course and/or 1 dot below, 2 dots above glidepath. Not more than momentary descent below DH.

b. **PAR (optional):** Followed controller instructions. Not more than momentary descent below DH.

- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Courses: +/-2 dots; Glideslope +/-1 ¾ dots below or 2 ¾ dots above.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures or directives. Excessive or erratic corrections. Not in a position for a safe landing. Extended flight below DH. Exceeds Q- criteria.

35. Non-Precision Approach:

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to fly a non-precision approach as published/directed. Complied with all restrictions. Made smooth and timely corrections. Position would have permitted a safe landing. Not more than momentary descent below MDA. *Guideline:* Course deviation within +/-1 dot; MDA deviation: -50/+100 feet. *Note:* The -50 foot tolerance at MDA applies only to momentary excursions.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. *Guideline:* Course deviation within +/-2 dots; MDA deviation: -50/+150 feet. *Note:* The -50 foot tolerance at MDA applies only to momentary excursions.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures or directives. Excessive or erratic corrections. Not in a position for a safe landing. Extended flight below MDA. Exceeded Q- criteria.

36. Circling Procedures (optional):

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to fly a circling maneuver from a instrument approach as directed. Complied with all restrictions. Maneuver would have permitted a safe landing.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures or directives. Did not comply with instructions or restrictions. Maneuver compromised safety or would not have permitted a safe landing.

37. Transition to Landing:

- Q** Complied with instructions/restrictions. Able to safely land the aircraft at the termination of an instrument approach in the desired landing area as briefed.
- Q-** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness and/or did not perform as briefed.

- U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Did not comply with instructions or restrictions. Did not land safely or in the desired landing area.

38. Missed Approach/Climbout:

- Q Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Executed missed approach/climbout as published/directed.
- Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Did not comply with instructions or restrictions.

39. Unusual Attitude Procedures (optional):

- Q Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to recover from an unusual attitude using appropriate procedures.
- Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unable to apply correct recovery procedures.

V. INSTRUCTOR: (P/FE)

Asterisk (*) items identify critical sub-areas

***40. Ability to Instruct:**

- Q Reviewed student's present level of training and defined mission events to be performed. Developed a sound plan for accomplishing necessary tasks. Provided a well-organized, thorough student briefing. Planned ahead and made timely decisions. Demonstrated ability to communicate effectively and offer instruction or suggestions for improvement.
- U Failed to assess student's present level of training. Briefings were marginal or non-existent. Did not plan ahead or anticipate student problems. Inability to communicate effectively with the student or did not provide corrective actions where necessary.

***41. Demonstration of Maneuvers:**

- Q Able to effectively demonstrate procedures and maneuvers. Demonstrated thorough knowledge of aircraft systems, procedures and all applicable publications and directives.
- U Did not demonstrate correct procedures. Insufficient depth of knowledge about aircraft systems, procedures, or applicable publications or directives.

***42. Performance Analysis/Critique:**

- Q Accurately assessed student performance. Able to discern problem areas. Correctly identified performance deficiencies or strengths. Able to provide performance feedback at appropriate times. Able to reconstruct the flight, offer analysis and provide corrective guidance where appropriate. Completed all training documents thoroughly and accurately.

- U Inaccurate assessment of student performance. Failed to discern, misdiagnosed problem areas. Overlooked or omitted major discrepancies. Provided performance feedback at inopportune times or not at all. Unable to reconstruct the flight, offer analysis, provide corrective guidance. Failed to complete training documents properly. Comments in training documents insufficient to determine student's status, did not reflect actual performance of student.

VI. MISSION (as applicable): Mission evaluations may be conducted day or night, with or without NVGs. Use the appropriate sub-areas for the specific mission(s) being evaluated. Refer to MAJCOM guidance for applicable unit missions.

43. VFR Navigation:

- Q Familiar with and able to effectively use available aircraft navigational systems. Able to satisfactorily determine position when map reading. Recognized check/turn points. Consistently remained on planned course. Able to adjust for deviations in time and course. Flight engineer assisted pilot as briefed/required in identifying terrain features and or obstacles while providing timely and useful navigation inputs as briefed/required throughout the mission.
 - a. **Dead Reckoning:** Able to use the principles of time, distance, and heading to determine aircraft position, navigation, and destination. Complied with appropriate planning guidance (used proper symbols, posted route on master map, etc.).
 - b. **Contour Navigation:** Complied with appropriate planning guidance (used proper symbols, posted route on master map, etc.). Remained within route/area boundaries. Effectively used terrain to determine route, altitude, ground speed, and aircraft masking.
 - c. **Low-Level Navigation:** Complied with appropriate planning guidance (used proper symbols, posted route on master map, etc.). Able to use the principles of time, distance, heading to determine aircraft position, navigation, and destination. Remained within route/area boundaries. Effectively used terrain for masking if available.
- Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Able to regain position orientation in a minimal amount of time. Adapted to missed check/turn points. Flight engineer did not provide adequate navigational input as briefed/required yet did not compromise safety or mission effectiveness.
- U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with or did not execute maneuvers IAW the flight manual or other directives. Unfamiliar with and unable to effectively use available aircraft navigational systems. Unable to satisfactorily determine position when map reading. Did not recognize check/turn points. Consistently deviated from planned course. Unable to adjust for deviations in time and course. Flight engineer did not assist pilot as briefed/required in identifying terrain features and or obstacles while providing timely and useful navigation inputs as briefed/required throughout the mission. Failed to monitor aircraft systems/instruments and/or aircraft flight path/position. Did not assist pilot flying as briefed/required or accomplish the mission.

44. Tactical Operations: (P/FE)

Q(P)Familiar with procedures and able to execute appropriate maneuvers IAW the flight manual and other directives. Smooth, precise, and controlled aircraft movement during approach / hovering / takeoff. Thoroughly aware of power requirements/limitations. Proper consideration and use of terrain features and wind conditions. If not flying, closely monitored aircraft systems / instruments and aircraft flight path/position.

- a. **En Route:** Chose and flew an effective route, altitude and check/turn points. Flew above the minimum altitude and in an established low level area.
- b. **Terminal Operations:** Arrived at target within ± 2 minutes. Correctly applied authentication procedures. Familiar with and able to apply infil/exfil procedures. Developed an appropriate plan to accomplish the infil/exfil. Able to adapt to unforeseen circumstances or contingencies. Successfully accomplished the infil/exfil.
- c. **Threat Degradation:** Familiar with and able to apply threat degradation principles. Planned for and applied appropriate tactics for known and suspected threats consistent with directives. Took prompt, appropriate action to minimize exposure to unforeseen threats.

Q(FE)Familiar and complied with procedures IAW the flight manual and other directives. Provided clear, concise and positive direction to the pilot flying during approaches, landings, and departures. Computes TOLD and is thoroughly aware of power requirements/limitations. Ensured aircraft clearance from obstacles.

Q- Minor deviations from Q criteria. Arrived at the target within ± 5 minutes. Successfully accomplished authentication despite minor errors. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U(P)Major deviations from Q criteria. Aircraft control was erratic/unsafe. Unsuccessful authentication, or failure to authenticate. Unfamiliar with or unable to apply threat degradation principles. Did not plan for or apply appropriate tactics for known or suspected threats. Did not take prompt action, or failed to take appropriate action, to minimize exposure to unanticipated threats. Tactics used were ineffective in meeting the threat and/or accomplishing the mission. Mission effectiveness compromised. Failed to confirm or compute TOLD.

U(FE)Major deviations from Q criteria. Failed to provide clear, concise, and positive direction during approaches and departures that affected safe and effective mission accomplishment. Failed to confirm or compute TOLD or is unaware of power requirements / limitations. Inadequate aircraft clearance from obstacles.

45. Formation: (P)

Q Familiar with and complied with formation procedures and directives. Established appropriate formations. Positive control of flight/element. Smooth on the controls and had proper wingman considerations. Planned ahead and made timely decisions.

- a. **En route:** Maintained position with only momentary deviations. Made smooth and immediate position corrections. Maintained safe separation.
- b. **Lost Visual/No Joy Procedures:** Provided concise lost visual and rejoin instructions; correctly executed applicable actions.
- c. **Rejoin:** Able to make a smooth, timely join-up without excessive closure rate to the appropriate briefed position.

d. **Terminal Operations:** Maintained position with only momentary deviations. Made smooth and immediate position corrections. Maintained safe separation.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Some unfamiliarity with procedures or directives. Adequate flight management. Occasionally rough on the controls. Not unsafe, but made it difficult for wing man to maintain position. Did not always plan ahead and/or hesitant in making decisions. Some deviations in procedures. Slow to provide lost visual or rejoin instructions; instructions vague or unclear. Varied position considerably. Over controlled. Some procedure deviations. Minor deviations in lost visual procedures, slow to join-up.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures or directives. Did not establish appropriate formations. Rough on the controls. Little consideration for wing man. Did not plan ahead or indecisive. Major deviations in procedures. Did not provide adequate lost visual or rejoin instructions; instructions or execution incorrect. Unable to maintain a formation position. Abrupt position corrections. Did not maintain safe separation. Unsafe join-up or formation procedures. Incorrect lost visual procedures.

46. Search Procedures: (P/FE)

Q Familiar with the various types of search patterns and search procedures. Knowledgeable of scanning techniques and content of appropriate briefing guides. Able to correctly apply search procedures to a scenario.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with types of search patterns or search procedures. Inadequate knowledge of scanning techniques or content of briefing guides. Applied incorrect search procedures to a scenario. Mission effectiveness or flight safety compromised.

47. Remote Operations: (P/FE)

Q(P) Familiar with procedures and able to execute appropriate maneuvers IAW the flight manual and other directives. Smooth, precise, and controlled aircraft movement during approach/hovering/takeoff. Thoroughly aware of power requirements/limitations. Proper consideration and use of terrain features and wind conditions. If not flying, closely monitored aircraft systems/instruments and aircraft flight path/position. Ensured aircraft clearance from obstacles.

a. **Site Evaluations:** Effectively assessed landing risk. Evaluated and communicated the landing area's obstacles, size and topography, associated winds and turbulence, aircraft's power available/required, and departure route. Maintained approximately 300' above the site and a minimum of 50 KIAS during the high reconnaissance. Maintained a minimum of 50' above highest obstacle (AHO) and 50 knots during the low reconnaissance.

b. **Approach/Landing:** Performed landing IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained constant

groundtrack and approach angle. Descent and deceleration constant and even. Maintained constant heading during touchdown.

c. Departure: Performed takeoff IAW procedures outlined in the flight manual, other directives and commensurate with terrain. Smooth, precise, and controlled aircraft movement. Maintained constant groundtrack, obstacle clearance, and climbout angle. Smooth power application.

Q(FE)Familiar and complied with procedures IAW the flight manual and other directives. Computed required TOLD and is thoroughly aware of power requirements/limitations. Provided clear, concise and positive direction to the pilot flying during reconnaissance, approaches, landings, and departures. Ensured aircraft clearance from obstacles. Satisfactory knowledge for the use and employment of pyrotechnics.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness. Missed minor factors pertinent to the approach, landing, or departure. Evaluation not tailored to the situation or excessively detailed and time consuming. Confused or disorganized communication with crew.

U(P)Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver/mission effectiveness. Not familiar or did not comply with procedures. Failed to consider significant details pertinent to the approach, landing, or departure. Unable to clearly communicate with crew. Aircraft control was erratic/unsafe. Failed to verify that TOLD was computed and/or that an adequate power margin exists for the flight conditions.

U(FE)Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver/mission effectiveness. Not familiar or did not comply with procedures. Unable to clearly communicate with crew. Failed to compute or confirm TOLD or is unaware of power requirements/limitations. Failed to provide clear, concise and positive direction to the pilot flying during reconnaissance, approaches, landings, and departures. Inadequate aircraft clearance from obstacles. Severe lack of knowledge, and improper use, and employment of pyrotechnics.

48. Alternate Insertion and Extraction (Rescue Hoist, Rope Ladder, Fast Rope, or Rappel): (P/FE)

Q(P)Familiar with procedures and able to execute appropriate maneuvers IAW the flight manual and other directives. Smooth, precise, and controlled aircraft movement during approach/hovering/takeoff. Thoroughly aware of power requirements/limitations. Proper consideration and use of terrain features and wind conditions. If not flying, closely monitored aircraft systems/instruments and aircraft flight path/position. Provided clear, concise and positive direction to the pilot flying during reconnaissance, approaches, hovering, and departures. Maintained hover altitude +/-10 feet from desired/briefed; maintained hover heading +/-10 degrees from briefed/desired.

Q(FE)Familiar and complied with procedures IAW the flight manual and other directives. Computed required TOLD and is thoroughly aware of power requirements/limitations. Provided clear, concise and positive direction to the pilot flying during reconnaissance, approaches, hovering, landings, and departures. Ensured aircraft clearance from obstacles. Ensured required equipment is properly preflighted and configured for the mission.

Q-(P) Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Maintained hover altitude +/-20 feet from desired/briefed; maintained hover heading +/-20 degrees from desired/briefed.

Q-(FE) Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with or did not execute maneuvers IAW the flight manual or other directives. Aircraft control was erratic/unsafe. Failed to consider power requirements/limitations, use of terrain features and wind considerations. Failed to monitor aircraft systems / instruments and/or aircraft flight path/position. Did not assist pilot flying as briefed/required. Required equipment is not properly preflighted, configured for mission.

49. Water Operations: (P/FE)

Q(P) Familiar and complied with procedures, directives, and operations as applicable to the assigned mission. Able to effectively execute the assigned mission. Established appropriate traffic pattern, approach, and departure; enabled proper pyrotechnic and/or swimmer deployment. Smooth, precise and controlled aircraft movement.

Q(FE) Familiar and complied with procedures, directives, and operations as applicable to the assigned mission IAW the flight manual and other directives. Computed required TOLD and is thoroughly aware of power requirements/limitations. Provided clear, concise and positive direction to the pilot flying during reconnaissance, approaches, hovers, and departures; enabling proper pyrotechnic and /or swimmer deployment. Ensured aircraft clearance from obstacles and water and has a satisfactory knowledge in the use and employment of pyrotechnics. Established appropriate traffic pattern, approach, and departure; enabled proper pyrotechnic and/or swimmer deployment.

a. **Swimmer Deployment/Observation Pass:** Flown at an appropriate altitude and airspeed for effective deployment or observation IAW directives.

b. **Day Water Pattern:** Flown at appropriate altitude and airspeed IAW directives.

Q- Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures, directives, or operations. Incorrect traffic pattern, approach, or departure; procedures did not allow for proper pyrotechnic or swimmer deployment. Aircraft control was erratic or unsafe. Mission effectiveness or safety was compromised.

U(FE) Major deviations from Q criteria. Errors or omissions precluded safe and effective maneuver/mission effectiveness. Not familiar or did not comply with procedures. Unable to clearly communicate with crew. Failed to compute or confirm TOLD or is unaware of power requirements/limitations. Failed to provide clear, concise and positive direction to the pilot flying during reconnaissance, approaches, hovers and departures; calls were inconsistent and or erratic. Inadequate aircraft clearance from obstacles and/or water. Severe lack of knowledge, with regard to the use and employment of pyrotechnics.

50. Cargo Sling Operations: (P/FE)

- Q(P)** Familiar and complied with cargo sling procedures and directives. Properly briefed and executed hookup, flight and release procedures. Smooth, precise and controlled aircraft movement. Knowledgeable of power requirements and aware of safety concerns.
- Q(FE)** Familiar and complied with cargo sling procedures IAW the flight manual and other directives. Properly executed hookup and release procedures. Computed required TOLD and is thoroughly aware of power requirements/limitations. Provided clear, concise and positive direction to the pilot flying during takeoff, enroute, approaches and landings. Ensured sling load clearance from obstacles. Provided clear, concise and positive direction to place the sling load on a predesignated or specified area on initial attempt. FE allowed sling load to only be momentarily placed on the ground to dampen out oscillations. The sling load was then repositioned to the predesignated or specified area.
- Q-(P)** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
- Q-(FE)** Minor deviations from Q criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness. Directions allowed sling load to be positioned within the predesignated or specified area but required multiple attempts or repositioning after ground contact. While hovering, the FE's direction or lack of direction caused the load to briefly/unintentionally contact the ground.
- U (P)** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures, directives, or operations. Improperly briefed or executed hookup, flight, or release procedures. Aircraft control was erratic or unsafe. Inadequate knowledge of power requirements. Allowed load to come in contact with the ground on the approach. Mission effectiveness or safety was compromised
- U(FE)** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures, directives, or operations. Improperly executed hookup and/or release procedures. Inadequate knowledge of power requirements. Allowed load to come in contact with the ground on the approach. Direction or lack of direction allowed the sling load to be positioned outside the predesignated or specified area, despite numerous attempts to reposition after ground contact. Mission effectiveness or safety was compromised.

51. Pyrotechnics: (FE)

- Q** Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Able to deploy pyrotechnics using appropriate procedures.
- Q-** Minor deviations from Q criteria. Did not compromise safety, or maneuver/mission effectiveness.
- U** Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with types of pyrotechnics, and inadequate knowledge of deployment techniques or content of briefing guides. Applied incorrect procedures to a scenario. Mission effectiveness or flight safety compromised.

52. DV Support Operations: (P/FE)

IAW local directives.

53. Contingency Operations: (P/FE)

a. Navigation / Divert

IAW local directives.